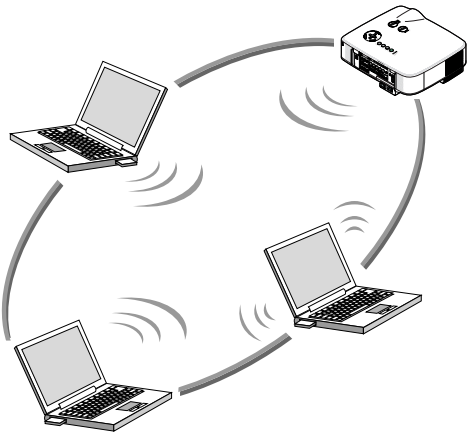
NEC Projector

NP3150 / NP2150 / NP1150

Wired and Wireless Network Setup Guide



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2. Operating Environment — 2
3. Connecting LAN Cable — 3
4. Setting the LAN Setting of Projector — 4
5. Setting the LAN Setting of Personal Computer ([Example] Wireless LAN of Windows Vista : Ad Hoc connection) — 5
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CD-ROM
User Supportware 5

Install in the PC the software stored in the User Supportware 5 CD-ROM.
This manual describes the LAN settings to use the software programs included in the supplied User Supportware 5 CD-ROM. For how to operate each software program, refer to “User’s Guide” (PDF) on User Supportware 5 CD-ROM.

Introduction

Thank you for purchasing the NEC projector NP3150/NP2150/NP1150 (hereafter referred to as the “projector”).
The projector is equipped with the following features so that you can give effective presentations.

- LAN port (RJ-45), USB Wireless LAN Unit, USB port (type A), supplied as standard
- Windows Vista standard functions Network Projector and Remote Desktop can be used.
- Viewer that displays images from a USB memory device*1

 *1 The projector is not supplied with a USB memory device.

The projector is also supplied with User Supportware 5 CD-ROM in which five programs of software are stored for effective use of these features. The software stored on this CD-ROM are as follows.
Each program runs on Windows Vista, Windows XP or Windows 2000.
Install in the PC the software in the User Supportware 5 CD-ROM before using.

- Image Express Utility 2.0
- Desktop Control Utility 1.0
- Ulead Photo Explorer 8.0 SE Basic
- Viewer PPT Converter 3.0
- PC Control Utility 3.0

This document explains how to configure the LAN settings to use the above software programs. For details of operations, refer to “User Supportware 5 User’s Guide” on User Supportware 5 CD-ROM and help function of the software.
For the network settings on the personal computer, refer to the User’s Manual for the personal computer or the peripheral equipment for the network.
Use a wireless LAN card conforming to the Wi-Fi standard for your personal computer.

Information on USB Wireless LAN:

The NP3150/NP2150/NP1150 series projectors distributed in some areas and countries do not come standard with the USB Wireless LAN Unit.
If you purchase the projector without the USB Wireless LAN Unit installed and need to present to the projector via a wireless connection, the optional USB Wireless LAN Unit must be installed.

NOTES

(1) The contents of this guide may not be reprinted in part or whole without permission.
(2) The contents of this guide are subject to change without notice.
(3) Great care has been taken in the preparation of this guide; however, should you notice any questionable points, errors or omissions, please contact us.
(4) Notwithstanding article (3), NEC will not be responsible for any claims on loss of profit or other matters deemed to result from using the Projector.
(5) Guides with incorrect collating or missing pages will be replaced.

Important Information

USB Wireless LAN Unit

FCC Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B Personal Computer and Peripheral, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment has been tested to comply with the limits for a Class B personal computer and peripheral, pursuant to Subpart B of Part 15 of FCC Rules. Only peripherals (computer input/output devices, terminals, printers, etc.) certified (DoC) or verified to comply with Class B limits may be attached to this equipment. Operation with noncertified (DoC) or non-verified personal computer and/or peripherals is likely to result in Interference to radio and TV reception.
The connection of a unshielded equipment interface cable to this equipment will invalidate the FCC Certification of this device and may cause interference levels which Exceed the limits established by FCC for equipment.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

Regulatory Information/Disclaimers
Installation and use of this Wireless LAN device must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment. The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of this device, or the substitution of the connecting cables and equipment other than manufacturer specified. It is the responsibility of the user to correct any interference caused by such unauthorized modification, substitution or attachment. Manufacturer and its authorized resellers or distributors will assume no liability for any damage or violation of government regulations arising from failing to comply with these guidelines.

⚠ Caution

To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 7.87"/20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

SAR compliance has been established in typical laptop computer(s) with USB slot, and product could be used in typical laptop computer with USB slot. Other application like handheld PC or similar device has not been verified and may not compliance with related RF exposure rule and such use shall be prohibited.

Usage restrictions in North America

The following channels can be used indoors only.

- In the United States and Canada: 36, 40, 44, and 48 channels
- In Mexico:149, 153, 157, 161, and 165 channels

The other channels can be used both indoors and outdoors.

This Class B digital apparatus complies with Canadian RSS-210.
Cet appareil numerique de la Classe B est conforme a la norme CNR-210 du Canada.

To comply with Canada RSS-210 (Issue 7) section A9.4 (b) (ii); this radio product will not transmit on any channels operating in the exclusion band of 5600 - 5650MHz. All channels in the 5600 ~ 5650MHz band will be disabled by factory firmware and is not user changeable.

Regulatory Statement:

Operation of this device is subjected to the following National regulations and may be prohibited to use if certain restriction should be applied.

France:

Outdoor use limited to 10mW e.i.r.p. within the band 2454 – 2483.5 MHz. Derogation in French overseas departments of Guyane and La Reunion: outdoor use not allowed in band 2400 - 2420 MHz.

Hereby, NEC Display Solutions, Ltd. declares that this USB Wireless LAN Unit (Model: NP01LM) is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Cautions on security when using wireless LAN products

With a wireless LAN, radio waves are used instead of LAN cables for the exchange of data between the wireless access points (computers, etc.), offering the advantage that LAN connections can be made freely within the range of the radio waves.

On the other hand, the radio waves reach all points within this range, regardless of walls or other obstacles, possibly resulting in the problems described below if the proper security measures are not taken.

- **Contents of transmissions may be intercepted**

 Malicious third parties may purposely intercept the radio waves and steal information contained in the transmissions, including such personal information as ID numbers, passwords, credit card numbers, e-mail messages, etc.

- **Improper intrusions**
 Malicious third parties may without permission access the personal or company network and steal personal or confidential information, pretend to be someone else and leak incorrect information, rewrite information that has been intercepted, introduce computer viruses or otherwise damage data or the system, etc.

Wireless LAN cards and wireless access points generally include security measures for dealing with these problems. Making the proper security settings before using the products can reduce the risk of such problems arising.

We recommend that you fully understand the problems that can arise when using the products without making the security settings, then that you make the security settings based on your own decision and at your own discretion.

Cautions on Usage

⚠ Warning

- The USB Wireless LAN Unit is not meant for use with facilities or equipment involving the safeguard of human life, such as medical equipment, nuclear facilities or equipment, aeronautical or space equipment, transportation facilities or equipment, etc., or with facilities or equipment requiring high levels of reliability. Do not use the USB Wireless LAN Unit in such cases.
- Do not use the USB Wireless LAN Unit near cardiac pacemakers.
- Do not use the USB Wireless LAN Unit near medical equipment. Doing so may cause electromagnetic interference with the medical equipment, possible leading to death.
- Do not disassemble or modify the USB Wireless LAN Unit in any way. Doing so could lead to fire or electric shock.
- Do not use the USB Wireless LAN Unit in wet or moist places, such as in bathrooms or near humidifiers. Doing so could lead to fire, electric shock or malfunction.

⚠ Caution

To prevent damage due to static electricity, eliminate any static electricity from your body before touching the USB Wireless LAN Unit.

- Static electricity from the human body may damage the USB Wireless LAN Unit. Before touching the USB Wireless LAN Unit, touch an aluminum sash, a door knob, or some other metal object around you to eliminate the static electricity.

⚠ Caution

The radio waves used by the USB Wireless LAN Unit pass through the wood or glass used in normal homes (but not through window panes with built-in metallic mesh).
The radio waves do not pass through iron reinforcing bars, metal or concrete, however, so the USB Wireless LAN Unit cannot be used for communicating through walls or floors made with these materials.

Specifications

For United States, Canada, and Mexico

Product Name	NP01LM3	
Operating Voltage	5V (power supplied from the projector)	
Max Amps	Tx: 472 mA (Max) Rx: 300 mA (Max)	
Wireless Standard	IEEE802.11a, IEEE802.11b, IEEE802.11g	
Modulation Method	CCK/DQPSK/DBPSK/OFDM	
LED Display (Blue)	During communication: blinking Standby: slow blinking No operation: light off	
IEEE802.11a	Center Frequency Range/Operating channels	5150 to 5350, 5725 to 5850 MHz 36,40,44,48,52,56,60,64,149,153,157,161,165 channels
	Transmission method	OFDM method (Orthogonal Frequency Division Multiplexing method)
	Data Rates	54/48/36/24/18/12/9/6 (Mbps)
IEEE802.11b	Center Frequency Range/Operating channels	2412 to 2462 MHz 1 to 11 channels
	Transmission method	DS-SS method (direct dispersion spectrum dispersion method)
	Data Rates	11/5.5/2/1 (Mbps)
IEEE802.11g	Center Frequency Range/Operating channels	2412 to 2462 MHz 1 to 11 channels
	Transmission method	OFDM method (Orthogonal Frequency Division Multiplexing method)
	Data Rates	54/48/36/24/18/12/9/6 (Mbps)
Interface	USB 2.0 (connected to USB wireless LAN port on the projector)	
Dimensions	Width:1.1"/28 mm Height:0.43"/11 mm Length:3.03"/77 mm	
Weight	0.042 lbs/19 g	
Environmental Considerations	Operational Temperatures : 41° to 104°F / 5° to 40°C, 20% to 80% humidity (non-condensing) Storage Temperatures : 14° to 122°F (-10° to 50°C), 20% to 80% humidity (non-condensing)	

For other countries except United States, Canada and Mexico

Product Name	NP01LM2	
Operating Voltage	5V (power supplied from the projector)	
Max Amps	Tx: 472 mA (Max) Rx: 300 mA (Max)	
Wireless Standard	IEEE802.11a, IEEE802.11b, IEEE802.11g	
Modulation Method	CCK/DQPSK/DBPSK/OFDM	
LED Display (Blue)	During communication: blinking Standby: slow blinking No operation: light off	
IEEE802.11a	Center Frequency Range/Operating channels	5150 to 5250, 5250 to 5350, 5470 to 5725 MHz 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140 channels
	Transmission method	OFDM method (Orthogonal Frequency Division Multiplexing method)
	Data Rates	54/48/36/24/18/12/9/6 (Mbps)
IEEE802.11b	Center Frequency Range/Operating channels	2412 to 2472 MHz 1 to 13 channels
	Transmission method	DS-SS method (direct dispersion spectrum dispersion method)
	Data Rates	11/5.5/2/1 (Mbps)
IEEE802.11g	Center Frequency Range/Operating channels	2412 to 2472 MHz 1 to 13 channels
	Transmission method	OFDM method (Orthogonal Frequency Division Multiplexing method)
	Data Rates	54/48/36/24/18/12/9/6 (Mbps)
Interface	USB 2.0 (connected to USB wireless LAN port on the projector)	
Dimensions	Width:1.1"/28 mm Height:0.43"/11 mm Length:3.03"/77 mm	
Weight	0.042 lbs/19 g	
Environmental Considerations	Operational Temperatures : 41° to 104°F / 5° to 40°C, 20% to 80% humidity (non-condensing) Storage Temperatures : 14° to 122°F (-10° to 50°C), 20% to 80% humidity (non-condensing)	

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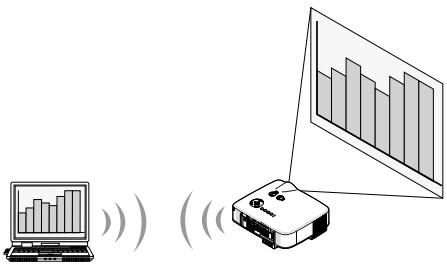
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1. What You Can Do with User Supportware 5

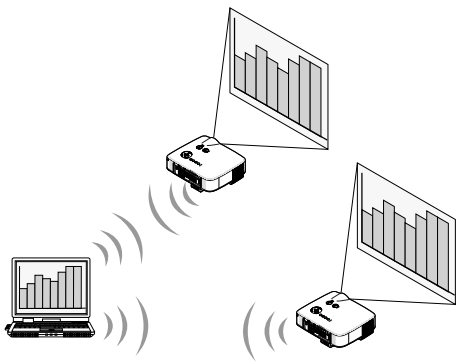
1-1. Image Express Utility 2.0

Image Express Utility 2.0 is a software tool used to send the screen of your personal computer to the projector via a network, without the signal cables.

- **High-speed, high-quality image transmissions based on NEC's original compression algorithm**
 NEC's original compression algorithm allows high-quality images to be sent over the network at high speed, from your personal computer to the projector.

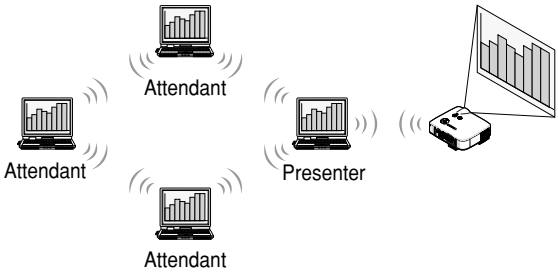


- **Simultaneous projection by multiple projectors**
 Images can be sent from a personal computer to not only one projector but also to two or more projectors at the same time.



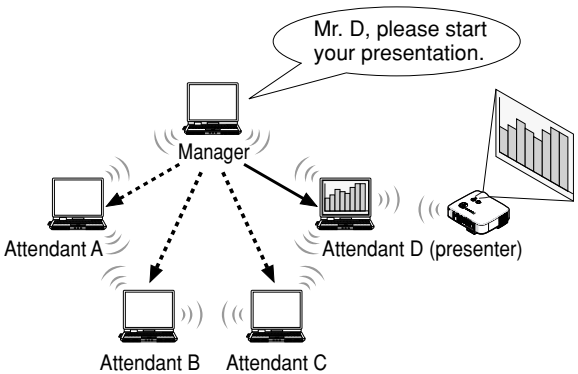
- **"Easy Connection" function for connecting wireless LAN**
 By using "Easy Connection" function*1, the complicated setting of wireless LAN can be simplified.
 *1 This function can be used when Windows XP is used as the OS and when you have a "Computer Administrator" privilege. If the OS is Windows Vista, input of logon password as "Administrator" may be prompted.
 The "Easy Connection" function cannot be used with Windows 2000.

- **Projected images can be transferred and saved to personal computers.**
 When "Meeting Mode" is used, projected images can be sent to the personal computers of all the participants (attendants) of a "Meeting". The received images can be saved to your personal computer with a memo (text data) attached.



- **1-click switching of presenter**
 When switching to another presenter during the conference, the participants (attendants) can simply click a button to switch over to the new presenter.

- **Central management of the projecting personal computer**
 Using the Training Mode allows you to use a single personal computer (Manager) to manage which personal computer (Attendant) projects. Possible operation includes switching projecting personal computers to project from, as well as temporarily terminating communication with the projector.



Note

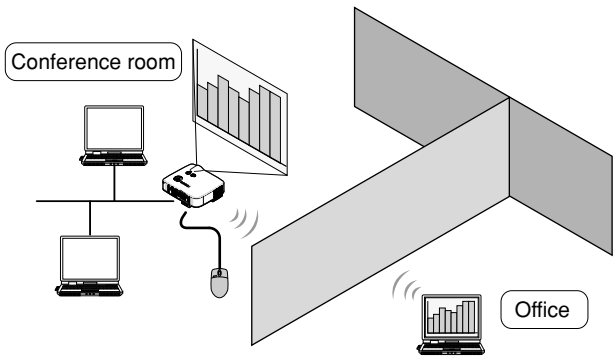
The Training Mode is not installed via the "Typical" installation option when Image Express Utility 2.0 is installed.
To use Training Mode, select "Extension" installation option on the install selection screen that is displayed while Image Express Utility 2.0 installation is in progress, and select "Training (Attendant)" or "Training (Manager)".

1-2. Desktop Control Utility 1.0

Desktop Control Utility 1.0 is software that operates the desktop screen of a personal computer at a remote location from the projector by using a network.

- A commercially available USB mouse is connected to the projector to operate the personal computer.

- Suppose, for example, a PowerPoint file to be presented in a conference is saved to a personal computer in your office. If this personal computer is connected to the projector in the conference room with LAN when the conference is held, the desktop screen of the personal computer in your office (Windows Vista/Windows XP/Windows 2000) can be projected and the PowerPoint file can be presented by operating the projector. In other words the personal computer does not need to be brought into the conference room.



Important

- You can use the Desktop Control Utility 1.0 to operate a personal computer located in a separate room from the projector over a network. Therefore, care must be exercised to prevent any third party from viewing the screen of your personal computer (important documents), copying files, or turning off the power.
 NEC assumes no liability for any loss or damages arising from information leak or system failure while you are using Desktop Control Utility 1.0.
- In the Windows operating system, select [Control Panel] → [Hardware and Sound] → [Power Options]. Set [Change when the computer sleeps] to [Never]. (in the case of Windows Vista) This will disconnect LAN connection when the personal computer goes in the standby mode while the Desktop Control Utility 1.0 is being used.
- The screen saver function is off while Desktop Control Utility 1.0 is running.

1-3. Ulead Photo Explorer 8.0 SE Basic

Ulead Photo Explorer 8.0 SE Basic (hereafter referred to as “Ulead Photo Explorer 8.0”) is a multimedia image file management tool developed by Ulead Systems, Inc. This tool has functions to capture images from a digital camera or scanner and to process or edit images, as well as image file management functions. In addition, slideshows and screen savers can also be easily created.

- Ulead Photo Explorer 8.0 in the User Supportware 5 CD-ROM has functions that allow you to use the projector more conveniently, in addition to the functions that come with the software, for when an NEC projector is connected.
 Additional functions are listed below.
 For details of each function, refer to the help function of Ulead Photo Explorer 8.0.
 - **Send Image**
 Sends images to the projector.
 - **Converting PowerPoint file**
 Converts a PowerPoint file into an image file.
 - **Send Logo**
 Registers an image file as the logo data of the projector.
 - **Capture**
 Saves the screens of the personal computer as image files.
 - **Start Slide Show**
 Sends the image of a slideshow to the projector and executes the slideshow on the projector.
 - **Viewer Output**
 Converts a slideshow into an index file that can be played back by the viewer function of the projector and outputs the index file.
 - **Connection Selection**
 Select the projector to connect.

- The personal computer and projector may be connected with wired LAN or wireless LAN.

1-4. Viewer PPT Converter 3.0

Viewer PPT Converter 3.0 is software that converts files created with PowerPoint 95/97/ 2000/ 2002/2003/2007 into an index file that can be displayed with the viewer function of the projector.

- When converting, specify a USB memory device as the destination to which the index file is to be saved. Then you can easily make your presentation by simply inserting the USB memory device into the projector (viewer function of the projector).

- If PowerPoint 2000/2002/2003/2007 is installed in your personal computer, you can activate Viewer PPT Converter 3.0 from PowerPoint (PPT Converter add-in is automatically registered to PowerPoint).

1-5. PC Control Utility 3.0

PC Control Utility 3.0 is software that allows you to operate the projector from the personal computer when the personal computer and the projector are connected with LAN (wired or wireless) or a serial cable.

- You can operate the projector as follows from your personal computer.
 For details of each function, refer to the help function of PC Control Utility 3.0.

 - Power on/off
 - Input signal switching
 - Muting (temporarily disabling audio/video)
 - Freezing (locking the projected image)
 - Logo image transmission

2. Operating Environment

2-1. Supported Projector

User Supportware 5 supports the following NEC projector (as of August 2007)

NP Series	NP3150/NP2150/NP1150

Reference Some of software can be used with projectors other than the above projectors. For details, refer to the help function of each software.

2-2. Supported the wireless LAN security type

The projector supports the wireless LAN security called WPA-PSK or WPA2-PSK (encryption type:TKIP/AES) as well as WEP. WPA-PSK or WPA2-PSK (TKIP/AES) provides stronger security than WEP where encryption keys are automatically changed, also providing simple authentication.

- The projector's WPA-PSK/WPA2-PSK supports the TKIP or AES encryption type.
- WPA-PSK/WPA2-PSK is available only when "INFRASTRUCTURE" is selected in "NETWORK TYPE" of the "CONNECTION" page.

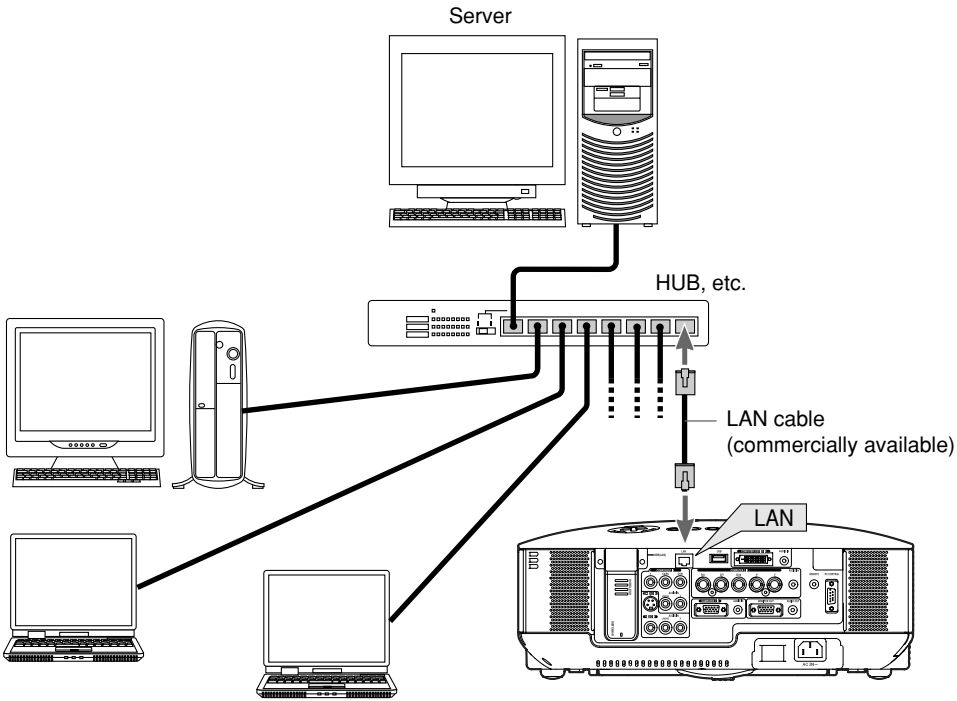
2-3. Operating Environment

The following is the operating environment for Image Express Utility 2.0. For the operating environment of other software, please refer to the help function of each software.

Supported OS	Windows Vista (32-bit version) Home Basic Windows Vista (32-bit version) Home Premium Windows Vista (32-bit version) Business Windows Vista (32-bit version) Ultimate Windows Vista (32-bit version) Enterprise Windows XP Home Edition Service Pack 2 or later Windows XP Professional Service Pack 2 or later Windows XP Tablet PC Edition (Windows XP Tablet PC Edition Service Pack 2 or later) Windows 2000 Professional Service Pack 4 or later • Windows power-saving function is not supported. • The “Easy Connection” supports the “Administrator” privilege of Windows Vista or the “Computer Administrator” privilege of Windows XP.
Supported hardware	IBM PC/AT compatible personal computers CD-ROM drive required for installation
CPU	• Windows Vista Pentium 4/Pentium M of 800 MHz or higher required Dual core CPU of at least 1 GHz is recommended • Windows XP/2000 Sender personal computer Pentium MMX processor or higher required Pentium 800 MHz or higher recommended Recipient personal computer Pentium III 800 MHz or higher required Pentium 4 1.6 GHz or higher recommended
Memory	• Windows Vista 512 MB or more required (1 GB or more recommended). • Windows XP 128 MB or more required (192 MB or more recommended) • Windows 2000 64 MB or more required (128 MB or more recommended) More memory may be necessary if other applications run at the same time.
Graphic processor (Windows Vista)	The “Graphics” score of “Windows Experience Index” recommends 3.0 or more.
Network environment	TCP/IP-compatible wired LAN or wireless LAN environment required
Resolution	1024 dots x 768 lines recommended
Screen Colors	High Color (15 bits, 16 bits) True Color (24 bits, 32 bits) • 256 or fewer colors are not supported.

3. Connecting LAN Cable

Connect a LAN cable to the LAN port (RJ-45) of the projector when connecting the projector to wired LAN.
After connecting LAN cable to the projector, set the required settings for the projector (next page).



4. Setting the LAN Setting of Projector

Reference For how to turn on/off the power to the projector and how to operate the buttons and remote control of the projector, refer to “User’s Manual” included in the User’s Manual CD-ROM.

4-1. Displaying On-Screen Menu (NETWORK SETTINGS)

Preparation:

Turn on the power to the projector and project images to the screen.
It is not necessary to select the signals.

1 Press the (MENU) button.

The on-screen menu will be displayed.

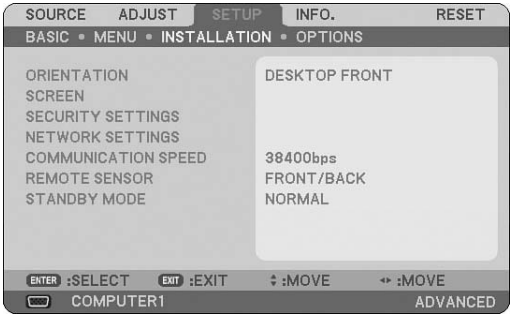


2 Use the (SELECT ▶) button to select the Setup submenu.

3 Press the (ENTER) button.

The “BASIC” tab will be highlighted.

4 Press the (SELECT ▶) button to highlight the "INSTALLATION" tab.



5 Press the (SELECT ▼) button to highlight "NETWORK SETTINGS", and press the (ENTER) button.

The "NETWORK SETTINGS" screen will be displayed.

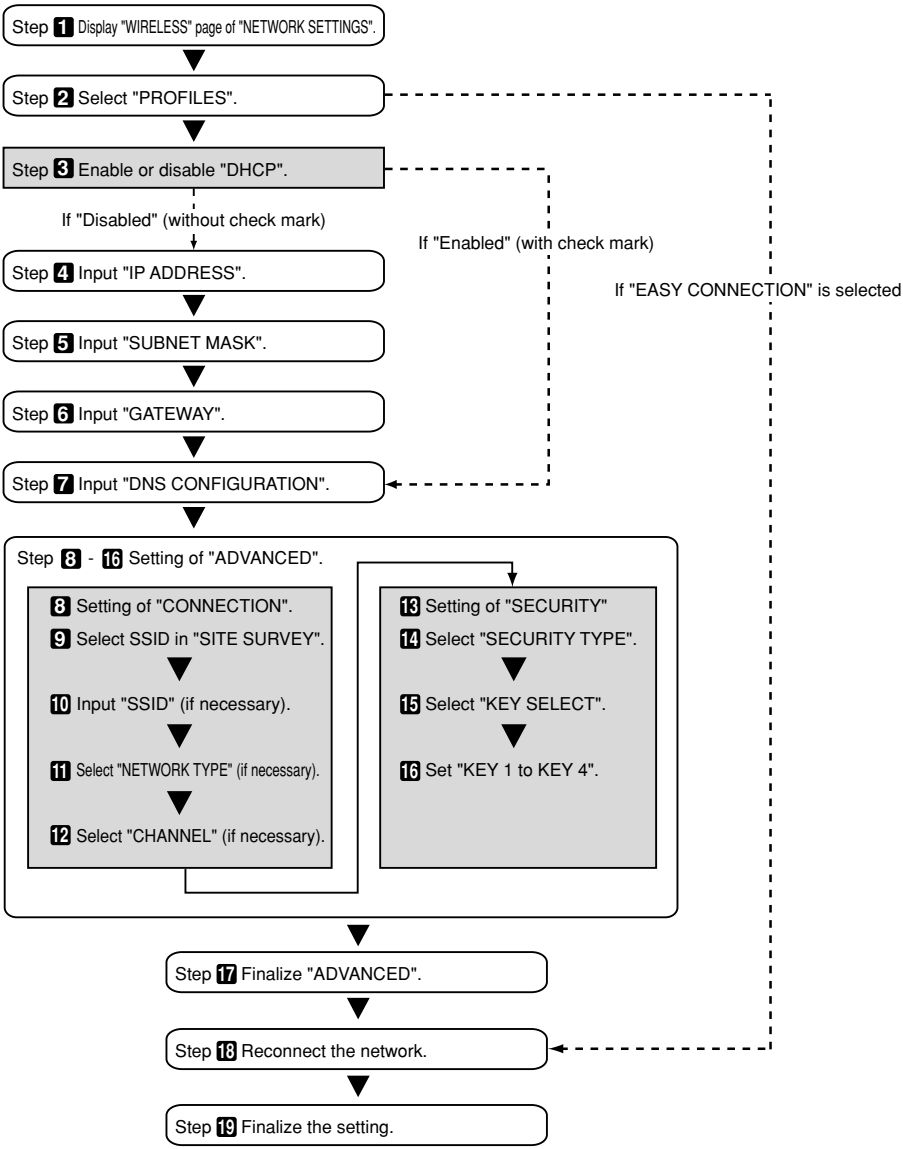


- To make setting of wireless LAN
 Proceed to "4-2. Wireless LAN" (next page).
- To make setting of wired LAN
 Proceed to "4-3. Wired LAN" (page 28).

4-2. Wireless LAN

When connecting the wireless LAN, configure the LAN settings in the “WIRELESS” page of “NETWORK SETTINGS” selected from On-Screen Menu.

■ Flow of Setting

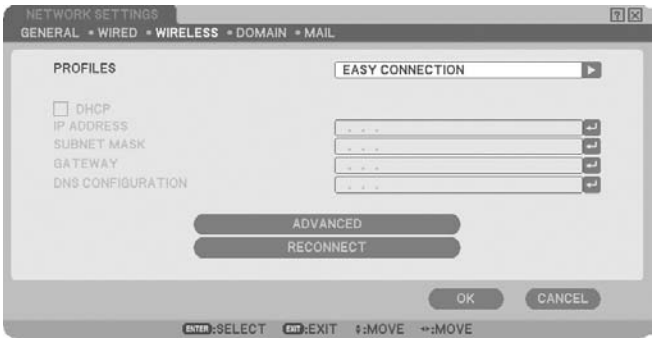


■ Setting Wireless LAN

1 Display the “WIRELESS” page of “NETWORK SETTINGS”.

Configure the setting of wireless LAN in the “WIRELESS” page of “NETWORK SETTINGS” selected from On-Screen Menu.

<1> In the “NETWORK SETTINGS” setting window, if the “GENERAL” tab is highlighted, press the (SELECT ▶) button to highlight “WIRELESS”.
The “WIRELESS” page will be displayed.



- If “NETWORK SETTINGS” is not displayed, refer to “4-1. Displaying On-Screen Menu (NETWORK SETTINGS)” (page 17).

2 Select “PROFILES”.

<1> Press the (SELECT ▼) button once to highlight the “PROFILES” field and press the (SELECT ▶) button.

<2> Use the (SELECT ▼/▲) button to highlight “PROFILE 1”, and press the (ENTER) button.

- “PROFILE 1” or “PROFILE 2” can be stored in the memory of the projector as the setting for LAN.
- “EASY CONNECTION” is a mode in which the personal computer that runs Image Express Utility 2.0 in the User Supportware 5 CD-ROM is easily connected to wireless LAN.
 Note that “EASY CONNECTION” does not support software other than Image Express Utility 2.0.
- When “EASY CONNECTION” is selected, the IP ADDRESS and SUBNET MASK do not have to be set. To use “EASY CONNECTION”, the user account of Windows must be [Administrator] privilege (Windows Vista) or [Computer Administrator] privilege (Windows XP). It cannot be used with Windows 2000.

3 Set “DHCP”.

Check this check box if the network to which the projector is to be connected automatically assigns the IP address via the DHCP server.

<1> Press the (SELECT ▼) button once to highlight the “DHCP” check box and press the (ENTER) button.

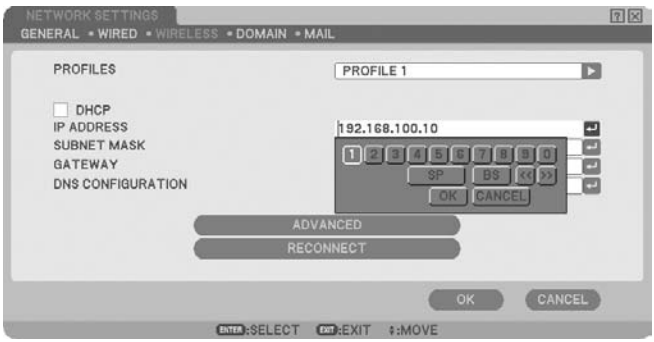
A check will be given if there is no mark found in the box.

- To clear the check box, press the (ENTER) button once again.
- If “DHCP” is checked, move the highlight to “ADVANCED” and press the (ENTER) button. Proceed to step 9 (page 23). Input “DNS CONFIGURATION” field as necessary.
- If “DHCP” is not checked, input “IP ADDRESS”, “SUBNET MASK”, “GATEWAY”, and “DNS CONFIGURATION” as necessary. After each item has been set, move the highlight to “ADVANCED” and press the (ENTER) button. Proceed to step 9 (page 23).

4 Input “IP ADDRESS”.

If “DHCP” is not checked, input the IP address assigned to the projector by the administrator of the network to which the projector is connected.

<1> Press the (SELECT ▼) button once to highlight the “IP ADDRESS” field and press the (ENTER) button.
The software keyboard will be displayed.



<2> Use the (SELECT ▼▲◀▶) button to select a number to input, and press the (ENTER) button. The characters will be input.

<3> Repeat step <2> above to input the IP address.

- Each button on the software keyboard has the following function.
 - “SP” Inputs space.
 - “BS” Deletes one character to the left of the character insertion position in the “IP ADDRESS” field.
 - “ <<” “ >>” Moves the character insertion position in the “IP ADDRESS” field to the left or the right.
 - [OK] Finalizes the input character and closes the software keyboard.
 - [CANCEL] Cancels the input character and closes the software keyboard.

5 Input “SUBNET MASK”.

If “DHCP” is not checked, input the subnet mask of the network to which the projector is connected.
The method of inputting is the same as that of the “IP ADDRESS” field.

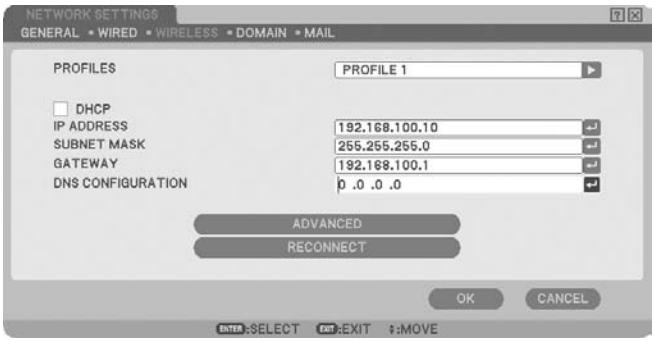
6 Input “GATEWAY”.

If “DHCP” is not checked, input the default gateway of the network to which the projector is connected.
The method of inputting is the same as that of the “IP ADDRESS” field.

7 Input “DNS CONFIGURATION”.

Set the IP address of the DNS server of the network to which the projector is connected.
The method of inputting is the same as that of the “IP ADDRESS” field.

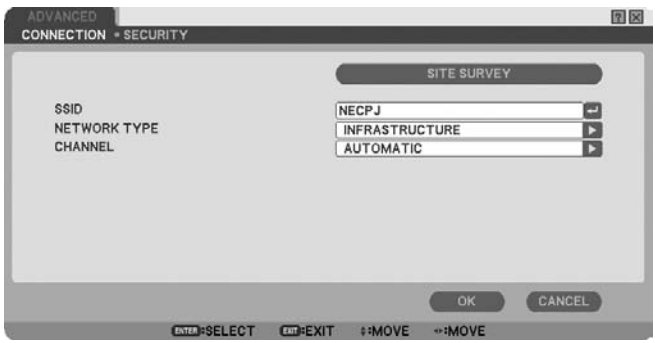
Example of setting 1



8 Select “ADVANCED”.

Set “CONNECTION” and “SECURITY” (encryption) specific to wireless LAN.

<1> Use the (SELECT ▼/▲) button to highlight “ADVANCED” on the “WIRELESS” page and press the (ENTER) button.
The “ADVANCED” screen will be displayed.



9 Select SSID from "SITE SURVEY" (if necessary).

A list of SSID that can be connected to wireless LAN in this place are displayed, and the SSID that are to be connected are selected from this list. When SSID is selected from the list, the "SSID" field, "TYPE" field and "CHANNEL" field will also be automatically set.

<1> Press the (SELECT ▼) button once to highlight "SITE SURVEY" and press the (ENTER) button.
Searching SSID will begin.
When searching SSID is complete, a list of SSID is displayed.



Icon

..... Wireless access point Personal computer (AD HOC)

..... WEP or WPA-PSK setting

<2> Use the (SELECT ▼/▲) button to highlight the SSID of the network to be connected.
Press the (SELECT ▶) button once to highlight [OK] and press the (ENTER) button.
If the SSID to be connected is not on the list, press the (EXIT) button.

Note

To connect SSID for which WEP or WPA-PSK is set, the same setting must be made on the projector (page 25).

10 Input or edit "SSID" (if necessary).

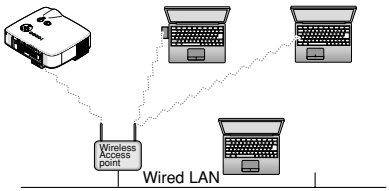
SSID selected in "SITE SURVEY" are automatically input.
If the highlight is moved to the "SSID" field and the (ENTER) button is pressed, a software keyboard is displayed and characters can be input or edited.
The default setting of the projectors is "NECPJ".

11 Select “NETWORK TYPE” (if necessary).

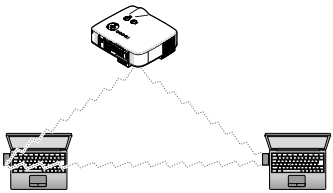
The communication mode of the SSID selected in “SITE SURVEY” are automatically selected.
The settings can be changed by moving the highlight to the “NETWORK TYPE” field and pressing the (SELECT ▶) button.

- “INFRASTRUCTURE” .. This is selected if communication is performed with two or more devices connected by wired or wireless LAN via a wireless access point.
- “AD HOC” This is selected when using the wireless LAN to directly communicate without a wireless access point.

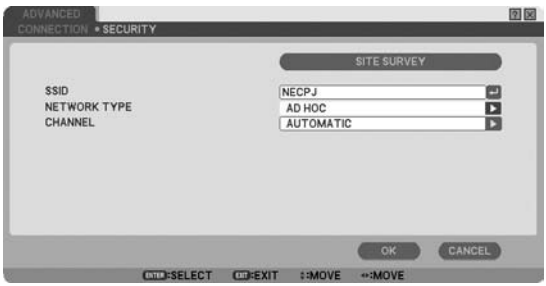
Example of connection when “NETWORK TYPE” is “INFRASTRUCTURE”



Example of connection when “NETWORK TYPE” is “AD HOC”



Example of setting 2



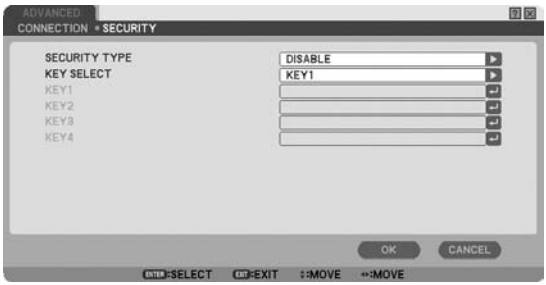
12 Select “CHANNEL” (if necessary).

Select a channel for communication using wireless LAN.
If neighboring channel numbers are used in one area, the speed of wireless LAN communication decelerates. To avoid such a situation, select discrete channel numbers.
The setting upon shipment is "AUTOMATIC".

13 Select “SECURITY” page (if necessary).

Proceed to step 17 if SECURITY is not set.

<1> Use the (SELECT ▼/▲) button to select the “CONNECTION” tab, and press the (SELECT ▶) button to highlight the “SECURITY” tab.
The “SECURITY” page will be displayed.



14 Select “SECURITY TYPE”.

Select whether SECURITY TYPE is performed or not.
To perform SECURITY TYPE, set an encryption key.

- DISABLE Encryption is not performed. There is a risk of transmitted data being intercepted by a third party.
- WEP(64BIT) Encryption is performed using WEP with a 64-bit long secret key.
- WEP(128BIT) .. Encryption is performed using WEP with a 128-bit long secret key. This offers enhanced security when compared to a 64-bit secret key.
- WPA-PSK Encryption is performed using WPA-PSK. This offers enhanced security compared to the WEP encryption scheme.
- WPA2-PSK Encryption is performed using WPA2-PSK, which is an enhanced version of WPA-PSK.

15 Select “KEY SELECT” (only when WEP is selected).

If “WEP (64BIT)” or “WEP (128BIT)” is selected from “SECURITY TYPE”, select which of the following encryption keys, “KEY 1” to “KEY 4”, is to be used.

16 Input “KEY 1” to “KEY 4” (only when WEP is selected).

If “WEP (64BIT)” or “WEP (128BIT)” is selected from “SECURITY TYPE”, input an encryption key. Set the same encryption key as the wireless access point and personal computer to be connected by the wireless LAN.
Two types of keys can be input for SECURITY.

SECURITY TYPE	Alphanumeric Character (ASCII)	Hexadecimal Number (HEX)
WEP (64 BIT)	5 characters	10 characters
WEP (128 BIT)	13 characters	26 characters

Reference If “WPA-PSK” or “WPA2-PSK” is selected in step 14, select “ENCRYPTION TYPE (TKIP or AES)” and then input the encryption key. The key should consist of 8 to 63 alphanumeric characters.

<1> Use the (SELECT ▼/▲) button to select an item for which the encryption key is to be input and press the (ENTER) button.
The software keyboard will be displayed.



<2> Use the (SELECT ▼▲◀▶) button, move the highlight to a character, and press the (ENTER) button.

<3> Repeat step <2> above to input the encryption key.
The character will be input.

- Each button on the software keyboard has the following function.
 - “MODE” Selects uppercase, lowercase, or special characters.
 - “SP” Inputs space.
 - “BS” Deletes one character to the left of the character insertion position in the encryption key field.
 - “ << ” “ >> ” Move the character insertion position in the encryption key field to the left or the right.
 - “HEX” or “ASCII” Selects alphanumeric character input or hexadecimal number input.
 - When “HEX” is displayed, alphanumeric characters (ASCII) can be input.
 - To input hexadecimal numbers, move the highlight to “HEX” and press the (ENTER) button. “ASCII” will be displayed instead of “HEX”, and hexadecimal numbers can be input.
 - When hexadecimal numbers can be input, “0x” is automatically displayed at the beginning of the input field.
 - [OK] Finalizes the input character and closes the software keyboard.
 - [CANCEL] Cancels the input character and closes the software keyboard.

17 Finalize “ADVANCED”.

<1> Use the (SELECT ▼/▲) button to highlight [OK] and press the (ENTER) button.
The “WIRELESS” page will be displayed again.

18 Reconnect the network.

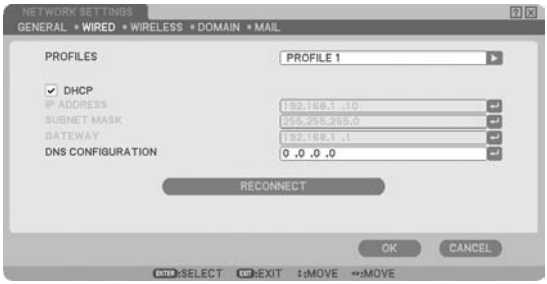
<1> Use the (SELECT ▼/▲) button to highlight “RECONNECT” and press the (ENTER) button.

19 Finalize the setting.

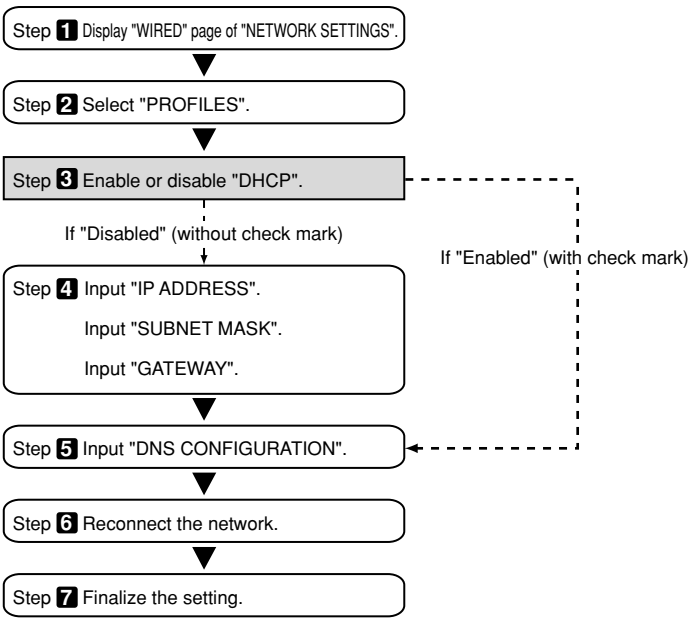
<1> Use the (SELECT ▼/▲) button to highlight [OK] and press the (ENTER) button.
The contents of the setting will be stored in the memory of the projector.

4-3. Wired LAN

When connecting a LAN cable to the LAN port of the projector, configure the LAN settings in the “WIRED” page of “NETWORK SETTINGS” selected from On-Screen Menu.



■ Flow of setting



■ Setting Wired LAN

1 Display the “WIRED” page of “NETWORK SETTINGS”.

Configure the setting of wired LAN in the “WIRED” page of “NETWORK SETTINGS” selected from On-Screen Menu. If “NETWORK SETTINGS” is not displayed, refer to “4-1. Displaying On-Screen Menu (NETWORK SETTINGS)” (page 17).

2 Select “PROFILES”.

“PROFILE 1” or “PROFILE 2” can be stored in the memory of the projector as the setting of LAN.

<1> Press the (SELECT ▼) button once to highlight the “PROFILES” field and press the (SELECT ►) button.
<2> Use the (SELECT ▼/▲) button to highlight “PROFILE 1” or “PROFILE 2”, and press the (ENTER) button.

3 Set “DHCP”.

Follow the same procedure as in “4-2. Wireless LAN” (page 19).

4 Input “IP ADDRESS”, “SUBNET MASK”, and “GATEWAY”.

Follow the same procedure as in “4-2. Wireless LAN” (page 19,20).

5 Input “DNS CONFIGURATION”.

Follow the same procedure as in “4-2. Wireless LAN” (page 20).

6 Reconnect the network.

<1> When all the above items have been input or set, use the (SELECT ▼/▲) button to highlight “RECONNECT” and press the (ENTER) button.

7 Finalize the setting.

<1> Use the button to highlight [OK] and press the (ENTER) button.
The setting will be stored in the memory of the projector.

5. Setting the LAN Setting of Personal Computer
([Example] Wireless LAN of Windows Vista: Ad Hoc connection)

This section explains the procedure for Ad Hoc connection of wireless LAN between the personal computer and projector, by using the wireless network setting function with Windows Vista Ultimate.

Preparation:

- If the computer you are using does not have a built-in wireless LAN unit, install a commercially available wireless LAN card driver to your personal computer, and complete setup of the wireless LAN card. For how to install the driver, refer to the User's Manual of the wireless LAN card.
- Check the display of the Windows Vista taskbar. If a network connection utility dedicated to a wireless LAN unit or a wireless LAN card is executed, terminate that utility.
- Make the wireless LAN setting of the projector. For details, refer to "4. Setting the LAN Settings of Projector" (page 15).
 Shown below is an example of the wireless LAN settings for the projector.

[Example of settings for projector]

Contents	Settings
IP Address	192.168.100.10
Subnet Mask	255.255.255.0
SSID	NECPJ
NETWORK TYPE	AD HOC
WEP	64bit
KEY SELECT	KEY1
KEY 1	NECDS

1 Click Windows [Start] → [Control Panel].

The "Control Panel" window will be displayed.

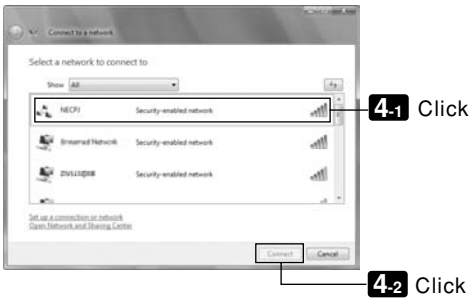
2 Click the [View network status and tasks] link that is displayed under [Network and Internet].

If you are not connected to a network, the following window will be displayed.



3 Click [Connect to a network].

A list of the networks you are able to connect to will be displayed.



4 From the list, click the SSID of the projector you want to connect to ("NECPJ" in this example), and click [Connect].

A screen for entering the Security key will be displayed.

5 Enter the key that you set in the WEP field on the projector ("NECDS" in this example).



6 Click [Connect].

7 When the screen shows "Successfully connected to NECPJ", check "☐ Save this network" and click [Close].

"Set Network Location" window will be displayed.

Note

- Unless "☐ Save this network" is checked, the Remote Desktop function will not operate normally.

8 Click the location suited for the application (e.g., "Work").

9 If a screen is displayed that says "Successfully set network settings", click [Close].

The "Network and Sharing Center" window will be displayed.

10 Click [View status].

The "Wireless Network Connection Status" window will be displayed.

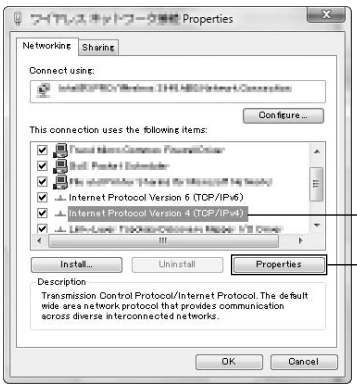


11 Click

11 Click [Properties].

The "Wireless Network Connection Properties" window will be displayed.

12 From the list displayed in the center of the properties window, select (click) [Internet Protocol Version 4 (TCP/IPv4)], and click [Properties].



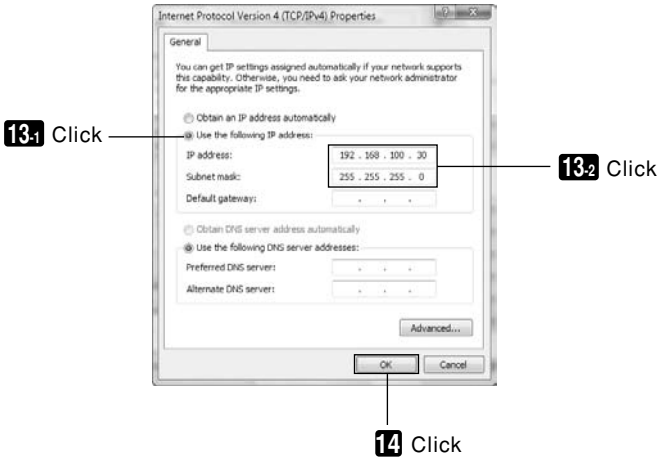
12-1 Click

12-2 Click

13 Click [Use the following IP address], and input [IP address] and [Subnet mask].

- If, for example, the [IP address] and [Subnet mask] of the projector are set as show in “Example of settings for projector” on page 30, set the personal computer as shown below.
- Example of setting the IP address and subnet mask.

	Projector (page 30)	Personal computer (Screen Below)
IP Address	192.168.100.10	192.168.100.30
Subnet Mask	255.255.255.0	255.255.255.0



14 Click [OK].

The “Wireless Network Connection Properties” window will be displayed.

15 Click [Close].

The “Wireless Network Connection Status” window will be displayed.

16 Click [Close].

The “Network and Sharing Center” window will be displayed.

17 Click the [X] in the top-right corner of the window.

The window will close.

This Completes the Ad Hoc connection of wireless LAN on the personal computer (Windows Vista). Use each software program in User Supportware 5 to transmit the PC screen to the projector.

6. Setting the LAN Setting of Personal Computer
([Example] Wireless LAN of Windows XP: Ad Hoc connection)

This section explains the procedure for Ad Hoc connection of wireless LAN between the personal computer and projector, by using the wireless network setting function with Windows XP Service Pack 2 (SP2).

Preparation:

- Install a commercially available wireless LAN card driver to your personal computer, and complete setup of the wireless LAN card. For how to install the driver, refer to the User's Manual of the wireless LAN card.
- Check the display of the Windows XP taskbar. If a network connection utility dedicated to a wireless LAN card is executed, terminate that utility.
- Make the wireless LAN setting of the projector. For details, refer to "4. Setting the LAN Setting of Projector" (page 17).
 Shown below is an example of the wireless LAN settings for the projector.

[Example of settings for projector]

Contents	Settings
IP Address	192.168.100.10
Subnet Mask	255.255.255.0
SSID	NECPJ
Mode	Ad hoc
WEP	64 bit
Key Select	Key 1
Key 1	NECDS

1 Click Windows [Start] → [Control Panel].

The "Control Panel" window will be displayed.

2 Double-click the "Network Connections".

- If the "Control Panel" window displays categories (with a blue background), click [Network and Internet Connections], and then click [Network Connections].

The "Network Connections" window will be displayed.



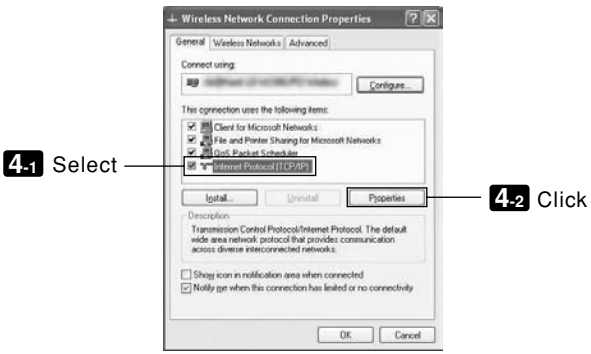
3 Right-click the [Wireless Network Connection] icon and click [Property].



A property window for wireless network connections will be displayed.



4 From the list of [This connection uses the following Items:], select (click) [Internet Protocol (TCP/IP)] and click [Properties].

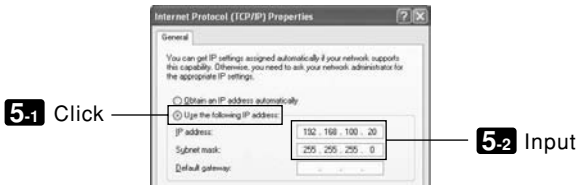


- The property window for wireless network connections will be displayed again.

5 Click [Use the following IP address:], and input [IP address]and[Subnet mask].

- If, for example, the [IP address] and [Subnet mask] of the projector are set as show in “Example of settings for projector” on page 34, set the personal computer as shown below.
- Example of setting the IP address and subnet mask.

	Projector (page 34)	Personal computer(Screen Below)
IP Address	192.168.100.10	192.168.100.20
Subnet Mask	255.255.255.0	255.255.255.0

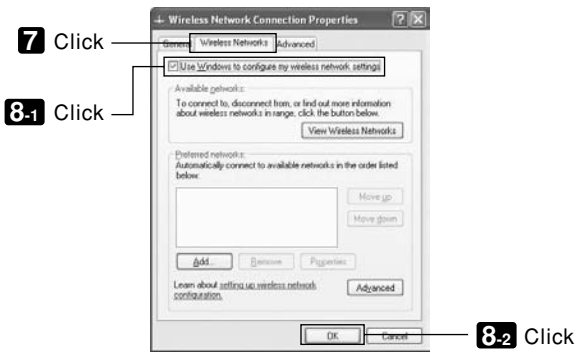


6 Click [OK].

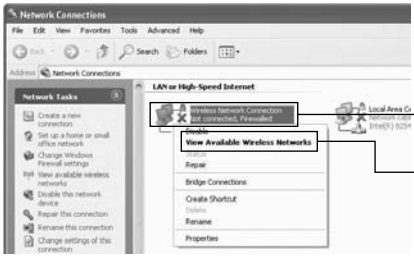
A property window for wireless network connections will be displayed.

7 Click the [Wireless Networks] tab.

8 Click [Use Windows to configure my wireless network settings], display the check mark () and click [OK].

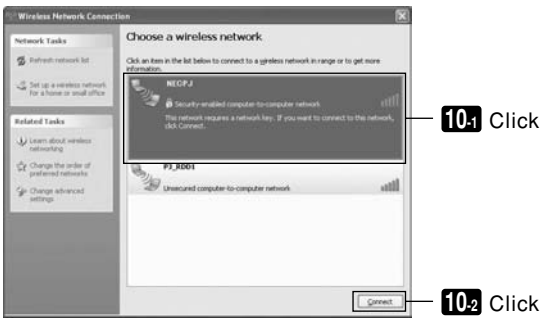


9 Right-click the [Wireless Network Connection] icon and click [View Available Wireless Networks].



The “Wireless Network Connection” window is displayed.

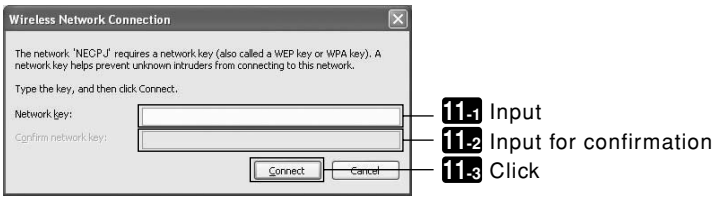
10 From the list, select SSID of the projector to be connected and click [Connect].



The “Wireless Network Connection” window is displayed.

11 Input WEP key to set up an encryption key and click [Connect].

- Input an encryption key of “WEP”. Enter “NECDS” in the Network key box, for example, if you have the WEP setting on the projector side configured with “64bit” and have “NECDS” input as Key 1.
- The same encryption key should be input in the confirmation.



The window above does not appear unless WEP key is not configured on the projector to be connected. Follow the steps below to change the encryption settings. For details, see the Windows Help file.

(1) Click [Change advanced settings] from the screen in step 10 above.
The “Wireless Network Connection Properties” window is displayed.

(2) Click the [Wireless Network] tab.

(3) Select SSID of the projector under [Preferred Networks] and click [Properties].
The “Properties” of the selected SSID is displayed. Configure the wireless network key under the [Association] tab according to those for the projector.

This Completes the Ad Hoc connection of wireless LAN on the personal computer (Windows XP). Use each software program in User Supportware 5 to transmit the PC screen to the projector.

7. Refer to “User’s Guide” and Help

Each software program in User Supportware 5 contains each help file that explains the functions and operation methods in detail.
Also, “User’s Guide” (PDF) explains the basic operation procedure of each software program carefully.

7-1. Displaying “User’s Guide” (PDF)

Important

- User Supportware 5 CD-ROM does not contain Acrobat Reader or Adobe Reader. If no PDF file can be opened from your personal computer, download Adobe Reader from the Adobe Systems Incorporated home page, and install it.

1 **Turn on your personal computer to start Windows.**

2 **Insert User Supportware 5 CD-ROM in the CD-ROM drive.**

The menu will be displayed.



3 **Click [Viewing User’s Guide].**

[User’s Guide] will be displayed.
For the following operations, browse User’s Guide according to Acrobat Reader or Adobe Reader operation method.

Reference

If the above menu is not displayed, follow these steps.
(*Example when Windows Vista is used)

1. Click [Start] of Windows.
2. Click [All programs] → [Accessories] → [Run].
3. In the [Open:] field, enter the CD-ROM drive name *1 (e.g., “Q:\”) followed by “SETUP.EXE” (e.g., “Q:\SETUP.EXE).

 *1 The CD-ROM drive name will vary depending on your personal computer’s configuration.

4. Click [OK].

The menu will be displayed.

7-2. Using Help

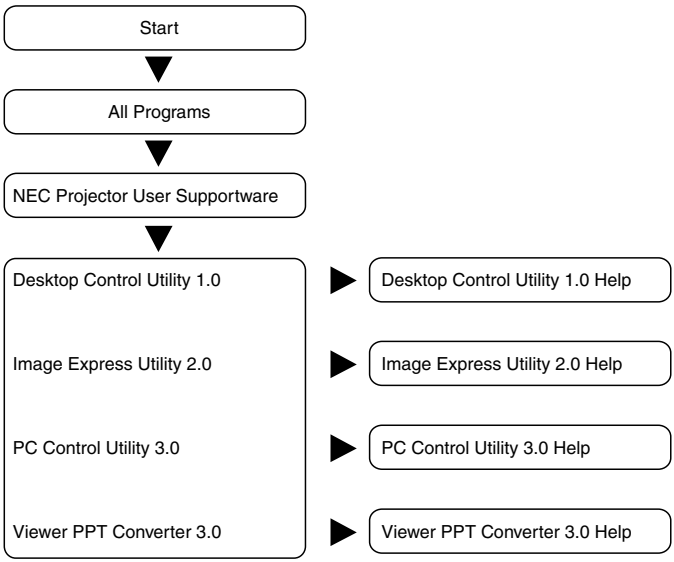
The functions and operation of each software are described on the Help screen. This section introduces how to display and use the Help screen.

Note

- The following instructions use operations under Windows Vista as an example.
- Before displaying Help, install each software onto your personal computer from the User Supportware 5 CD-ROM. You cannot run the programs nor view Help directly from the CD-ROM.

■ Displaying Helps other than Ulead Photo Explorer 8.0

Click in the following order.



Reference You can also display the Help by starting each program and clicking the [Help] menu or [Help] icon of that program.

■ Displaying Ulead Photo Explorer 8.0 Help

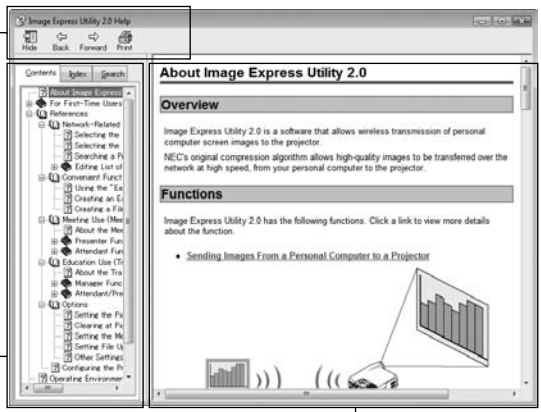
To display the Help of Ulead Photo Explorer 8.0, start the software and make your selection from the [Help] menu.

1 Click [All Programs] in the start menu → [Ulead Photo Explorer 8.0 SE Basic] → [Ulead Photo Explore 8.0 SE Basic], in that order.

The Ulead Photo Explorer 8.0 will start.

2 From the Ulead Photo Explorer 8.0 menu bar, select [Help] → [Ulead Photo Explorer Help] or [NEC Projector User Supportware Help].

■ Help Screen Layout



[Hide] button
Shows/hides the left pane.

[Back] button
Displays the previously displayed topic.

[Forward] button
Displays the previously displayed topic when using the [Back] button to step back through the topics.

[Print] button
Prints the displayed Help topic.

[Contents] tab
Displays the contents of Help. Select a topic to display contents in the right pane.

[Index] tab
Displays a list of keywords for Help. Select a keyword to display the associated topics.

[Search] tab
Searches through Help for the entered text.

Explanation displaying area
Displays content for the topic selected in the left pane.

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NEC Projector
User Supportware 5

- **Image Express Utility 2.0**
- **Desktop Control Utility 1.0**
- **Ulead Photo Explorer 8.0 SE Basic**
- **Viewer PPT Converter 3.0**
- **PC Control Utility 3.0**

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